

BASIS FOR THE AMENDMENT

Claims 1-8 have been canceled.

Claims 9-33 have been amended.

New Claims 9-33 are supported by original Claims 1-8, as well as the specification as originally filed.

No new matter is believed to have been added by these amendments.

REMARKS

Claims 9-33 are active in the present application.

Applicants wish to thank Examiner Stein for the helpful and courteous discussion with their undersigned Representative on March 11, 2003. The content of this discussion is expanded upon and is reflected in the following remarks.

The rejections of Claims 1 and 3 under 35 U.S.C. §102(b) and of Claim 2 under 35 U.S.C. §103(a), each over Hartmann et al, are obviated by amendment.

The present invention provides, in part, a layer obtained by thermal treatment from an aqueous dispersion applied to a substrate, the dispersion containing a silicon/titanium mixed oxide powder prepared by flame hydrolysis and the titanium dioxide content of the powder is between 2 and 20 wt.% (see Claim 9).

Applicants note that Hartmann et al fail to disclose or suggest the presently claimed layer as set forth in Claim 9, and Claims 10-20 which are dependent therefrom. Specifically, Hartmann et al fail to disclose or suggest a silicon/titanium mixed oxide powder containing a titanium dioxide content of the powder is between 2 and 20 wt.%. In fact, Hartmann et al specifically disclose a “flame-hydrolytically produced titanium dioxide mixed oxide with a BET surface of 10 to 150 m²/g which contains 1 to 30% by weight aluminum oxide or 1 to

30% by weight silicon dioxide” (column 1, lines 38-42). From this disclosure, it is clear that Hartmann et al has a TiO₂ content of 70 to 99 wt% (see column 1, lines 38-42), and as such a layer containing 2 to 20 wt% of TiO₂ is neither anticipated nor obvious. Accordingly, Applicants submit that Claim 9, and Claims 10-20 which are dependent therefrom, are free of the art of record and should be allowed.

The present invention further provides, in part, a layer obtained by thermal treatment from an aqueous dispersion applied to a substrate, the dispersion containing a silicon/titanium mixed oxide powder prepared by flame hydrolysis and wherein said silicon/titanium mixed oxide powder is a mixture of powders comprising at least one powder having a BET surface area of at least 130 m²/g and at least one powder having a BET surface area of at most 90 m²/g, wherein the ratio by weight of the powders with a lower BET to the powders with a higher BET surface area is between 40:60 and 99.5:0.5 (see Claim 21).

Applicants note that Hartmann et al fail to disclose or suggest the presently claimed layer as set forth in Claim 21, and Claims 22-33 which are dependent therefrom. Specifically, Hartmann et al fail to disclose or suggest a mixture of powders with the first powder having a BET surface area of at least 130 m²/g and the second powder having a BET surface area of at most 90 m²/g, much less in the claimed ratio.

In fact, the only disclosure by Hartmann et al of BET surface area is that their titanium dioxide mixed powder is a “flame-hydrolytically produced titanium dioxide mixed oxide with a BET surface of 10 to 150 m²/g” (column 1, lines 38-42). From this disclosure, the artisan would have no motivation to create a mixture of powders with the first powder having a BET surface area of at least 130 m²/g and the second powder having a BET surface area of at most 90 m²/g, much less in the claimed ratio. In addition, even if the artisan were to blindly stumble upon such a mixture, there would be no expectation of the advantageous properties flowing therefrom.

At pages 6-10 of the present specification, Applicants produce a first powder having a BET surface area of at least 130 m²/g (269 m²/g; see Example 2, page 7 of the substitute specification) and the second powder having a BET surface area of at most 90 m²/g (42 m²/g; see Example 1, page 6 of the substitute specification). These powders are then mixed to form an aqueous dispersion (see Example 4, page 9 of the substitute specification). When this aqueous dispersion was used to dip-coat a borosilicate glass, the resultant transparent layer has a thickness of 2.4 µm and has no cracks under an optical microscope (see Example 5, pages 9-10 of the substitute specification). Applicants submit that such a result would not be apparent from the disclosure of Hartmann et al.

Accordingly, Applicants submit that Claim 21, and Claims 22-33 which are dependent therefrom, are free of the art of record and should be allowed.

For all the foregoing reasons, Applicants respectfully request withdrawal of the rejections over Hartmann et al.

The rejection of Claims 2 and 3 under 35 U.S.C. §112, second paragraph, is obviated by appropriate amendment. Applicants acknowledge the Examiner's suggestion to address this ground of rejection. Withdrawal of this ground of rejection is respectfully requested.

The objection to Claims 4 and 5 under 37 C.F.R. §1.75(c) is obviated by amendment. These claims have been canceled and represented in appropriate dependent form. Withdrawal of this ground of rejection is requested.

Finally, Applicants note that MPEP §821.04 states:


...if applicant elects claims directed to the product, and a product claim is subsequently found allowable, withdrawn process claims which depend from or otherwise include all the limitations of the allowable product claim will be rejoined.

Applicants respectfully submit that should the new claims that correspond to the elected group (Claims 9-17 and 21-30) be found allowable, non-elected process claims (new Claims 18-20 and 31-33), which depend from the elected composition claims should be rejoined. Applicants wish to thank the Examiner for the indication to their undersigned Representative that these claims would be rejoined (see paper number 10).

Applicants submit that the present application is in condition for allowance. Early notification to this effect is respectfully requested.

Respectfully submitted,

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IN THE CLAIMS

Cancel Claims 1-8 and insert therefor the new Claims 9-33.

--9. - 33. (New)--